

CSc 3320: Systems Programming

Spring 2021

Homework

3: Total points 100

Submission instructions:

1. Create a Google doc for each homework assignment submission. 2. Start your responses from page 2 of the document and copy these instructions on page 1. 3. Fill in your name, campus ID and panther # in the fields provided. If this information is missing in your document TWO POINTS WILL BE DEDUCTED per submission.
4. Keep this page 1 intact on all your submissions. If this *submissions instructions* page is missing in your submission TWO POINTS WILL BE DEDUCTED per submission.
5. Each homework will typically have 2-3 PARTS, where each PART focuses on specific topic(s).
6. Start your responses to each PART on a new page.
7. If you are being asked to write code copy the code into a separate txt file and submit that as well.
8. If you are being asked to test code or run specific commands or scripts, provide the evidence of your outputs through a screenshot and copy the same into the document.
9. Upon completion, download a .PDF version of the document and submit the same.

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10 pts for the neatness factor of your presentation.

PART 1: 30pts

1. For each command tryout at least one example provided in

Chapter 3 of the Unix textbook. Feel free to use your own example. Show the screenshot for each command's output. Present your output in a tabular form with column 1 as index (1,2,3..), second column as the command, third as the usage, fourth as the screenshot of the output. You can just show a small snapshot for the output -- we do not need the entire screen's image.

```

[jchoi18@gsuad.gsu.edu@snowball ~]$ at 18:00
at> <EOT>
job 57 at Sat Mar 6 18:00:00 2021
[jchoi18@gsuad.gsu.edu@snowball ~]$

[jchoi18@gsuad.gsu.edu@snowball ~]$ crypt()
>
>

[jchoi18@gsuad.gsu.edu@snowball ~]$ gzip example.txt
gzip: example.txt: No such file or directory
[jchoi18@gsuad.gsu.edu@snowball ~]$

[jchoi18@gsuad.gsu.edu@snowball ~]$ tar -cvf example.tar example.txt
example.txt
[jchoi18@gsuad.gsu.edu@snowball ~]$

[jchoi18@gsuad.gsu.edu@snowball ~]$ awk 'END {print NR}' example.txt
1
[jchoi18@gsuad.gsu.edu@snowball ~]$

[jchoi18@gsuad.gsu.edu@snowball ~]$ diff example.txt example2.txt
1c1
< this is Example Text.
---
> this is example2 text
[jchoi18@gsuad.gsu.edu@snowball ~]$

[jchoi18@gsuad.gsu.edu@snowball ~]$ ln -s example.txt examplelink
[jchoi18@gsuad.gsu.edu@snowball ~]$ ls
a.out      example    example.tar  hello      midterm
checkError.sh  example2.txt  example.txt  hello.c    myname.c
csc3320     examplelink  foo.sh       hello.sh.gz
[jchoi18@gsuad.gsu.edu@snowball ~]$

```

```
[jcho18@gsuad.gsu.edu@snowball ~]$ uniq example.txt
this is Example Text.
[jcho18@gsuad.gsu.edu@snowball ~]$
```

```
[jcho18@gsuad.gsu.edu@snowball ~]$ gunzip hello.sh.gz
[jcho18@gsuad.gsu.edu@snowball ~]$ ls
a.out          csc3326      examplelink  foo.sh       hello.sh
archive        example      example.tar  hello        midterm
checkError.sh  example2.txt example.txt  hello.c      myname.c
[jcho18@gsuad.gsu.edu@snowball ~]$
```

```
[jcho18@gsuad.gsu.edu@snowball ~]$ su
Password:
wasd
su: Authentication failure
[jcho18@gsuad.gsu.edu@snowball ~]$ wasd
-bash: wasd: command not found
[jcho18@gsuad.gsu.edu@snowball ~]$ logout
Connection to snowball.cs.gsu.edu closed.
jonathan@jonathan-VirtualBox:~$
```

```
jonathan@jonathan-VirtualBox:~$ whoami
jonathan
jonathan@jonathan-VirtualBox:~$
```

Part II : 30pts

2. For each command tryout at least one example provided in **Chapter 4** of the Unix textbook. Feel free to use your own example. Show the screenshot for each command's output. Present your output in a tabular form with column 1 as index (1,2,3..), second column as the command, third as the usage, fourth as the screenshot of the output. You can just show a small snapshot for the output -- we do not need the entire screen's image.

```
jonathan@jonathan-VirtualBox:~$ chsh -s /bin/ash Bob
chsh: user 'Bob' does not exist
jonathan@jonathan-VirtualBox:~$
```

```
jonathan@jonathan-VirtualBox:~$ kill -l
1) SIGHUP      2) SIGINT      3) SIGQUIT     4) SIGILL      5) SIGTRAP
6) SIGABRT     7) SIGBUS      8) SIGFPE      9) SIGKILL     10) SIGUSR1
11) SIGSEGV    12) SIGUSR2    13) SIGPIPE    14) SIGALRM     15) SIGTERM
16) SIGSTKFLT  17) SIGCHLD    18) SIGCONT    19) SIGSTOP     20) SIGTSTP
21) SIGTTIN    22) SIGTTOU    23) SIGURG     24) SIGXCPU     25) SIGXFSZ
26) SIGVTALRM  27) SIGPROF    28) SIGWINCH   29) SIGIO       30) SIGPWR
31) SIGSYS     34) SIGRTMIN   35) SIGRTMIN+1 36) SIGRTMIN+2 37) SIGRTMIN+3
38) SIGRTMIN+4 39) SIGRTMIN+5 40) SIGRTMIN+6 41) SIGRTMIN+7 42) SIGRTMIN+8
43) SIGRTMIN+9 44) SIGRTMIN+10 45) SIGRTMIN+11 46) SIGRTMIN+12 47) SIGRTMIN+13
48) SIGRTMIN+14 49) SIGRTMIN+15 50) SIGRTMAX-14 51) SIGRTMAX-13 52) SIGRTMAX-12
53) SIGRTMAX-11 54) SIGRTMAX-10 55) SIGRTMAX-9  56) SIGRTMAX-8  57) SIGRTMAX-7
58) SIGRTMAX-6  59) SIGRTMAX-5 60) SIGRTMAX-4 61) SIGRTMAX-3 62) SIGRTMAX-2
63) SIGRTMAX-1 64) SIGRTMAX

jonathan@jonathan-VirtualBox:~$ ps
  PID TTY          TIME CMD
  2001 pts/0      00:00:00 bash
 26548 pts/0      00:00:00 ps

jonathan@jonathan-VirtualBox:~$ echo example text
example text
jonathan@jonathan-VirtualBox:~$
```



Part III : 30pts

3. For each command tryout at least one example provided in **Chapter 5** of the Unix textbook. Feel free to use your own example. Show the screenshot for each command's output. Present your output in a tabular form with column 1 as index (1,2,3..), second column as the command, third as the usage, fourth as the screenshot of the output. You can just show a small snapshot for the output -- we do not need the entire screen's image.

